

UNIVERSITY OF MINNESOTA COMPUTER CENTER  
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NOTICE OF CHANGES TO THE SYSTEM

Tim Hoffmann contributed a newly rewritten and optimized version of UNPAGE. The new version will be system resident and will be maintained on WPL. The new version of UNPAGE is much smaller and much faster than the first and also lacks many unused parameter options. The basic parameter structure and action, however, has not changed.

Bill Elliott repaired a bug in EXPLIB which prohibited removal of a permitted reel from the tape library.

Bill Sackett fixed a scheduling problem in MODVAL which caused the package to roll out if used on a busy system. The program now runs at a higher queue priority.

Kevin Matthews repaired a small problem in DAYFILE which resulted in two termination messages to time-sharing users.

The version of QREC installed on the last system was, again, not correct. Tim Salo discovered and fixed this latest problem which caused lost queue files. Tim also altered LPQ, the plotter driver, to use any channel for the plotter. Previously, the plotter channel was hard coded.

Bob Zalusky installed the SETVAL control statement (see DSN 2, 11 p. 2). SETVAL is an entry point to MODVAL. The command allows the user to alter certain fields of the VALIDUZ entry. A writeup file for SETVAL will soon be available. Meanwhile, DOCUMENT MODVAL for all the details.

Jeff Drummond changed the LIST80 utility to perform special processing of carriage control characters when the output file is type TT.

## PROPOSED CHANGES TO THE SYSTEM

### Multiple Copies of Files - by K.C. Matthews

COPYM was proposed in the DSN last month. We decided in the systems group meeting to investigate the addition of a multiple copy feature to one of the existing routines like COPYEI. This addition would allow multiple copies of tape files, and would not require an extra control card to be placed on the system.

Investigation shows that adding the multiple copy code to COPY or COPYEI is easy. Deciding how to specify the number of copies is trickier. The current format of the COPY control card is:

COPY(IFILE,OFIL,V,C)

IFILE = input file name.

OFIL = output file name.

V, if present, means rewind each file before and after the copy, and call VERIFY to verify the copy.

C, if present, means use coded (even parity) on tape files.

COPYEI has exactly the same parameters. Note that any characters may appear as the third or fourth parameters. It is the presence of some non-blank parameter that counts. (COPYEI copies to an end of information; COPY copies to an end of information or a double end file.)

There seem to be three possibilities for specifying the number of copies for these programs.

- (1) Add a fifth parameter, i.e. COPY(IFILE,OFIL,V,C,N)

If N is used to specify the number of copies, then the V parameter must be ignored. Thus, the typical multiple copy control card would be

COPY(IFILE,OFIL,,,N)

One problem with this approach is that you have to remember that N is the fifth parameter. The fact that V is ignored if N is present is also odd.

- (2) If the third parameter is a "good" number, treat it as the number of multiple copies required. Otherwise, treat it like the verify parameter. Thus

COPY(X,Y,9)            or  
COPY(X,Y,11B)

would specify that 9 multiple copies are to be made.

COPY(X,Y,X)           or  
COPY(X,Y,11C)

specify that X is to be copied to Y with the rewind/verify option. The fourth parameter, if specified, would still mean even tape parity. A problem with this approach is that it is not strictly upward compatible. The description of the third parameter in the KRONOS reference manual will be incomplete.

- (3) We can also add new control card parameters after a "/" on the control card. Then, up to four parameters before a "/" would be treated normally. After a "/", N= would specify the number of multiple copies. Thus,

## COPY(X,Y/N=9)

requests 9 copies of X onto Y. Using the standard rewind and verify parameter and the new N= option is inconsistent and one will have to be ignored.

This control card is upward compatible with the current routine. Other UCC parameters could be added after the "/" later.

John Larson and I propose that a multiple copy facility be added to COPY and COPYEI with one of the preceding argument schemes. Our preference is 3, then 2, then 1.

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## ACCSTAT - Retrieve Usage/Accounting Information - by S.P. Nachtsheim

This proposal is a revision of the original ACCSTAT proposal which was approved some time ago. Since the entire accounting revision procedure is being restudied and since the users have been demanding and deserve the proposed facility, this revised proposal is being submitted for approval.

An ACCSTAT file will be placed on each (Cyber 74 and 6400) system as a fast attach file. This file will be a random file and will be recreated during the accounting runs each morning (except Saturday and Sunday). The file will contain data as it currently exists in each accounting system. Certain reprogramming will be performed in order that each system will maintain daily, monthly and year-to-year figures.

The calling sequence for ACCSTAT will be:

ACCSTAT(L=lfm,UN=usernum,LO=options,BR,NA)

where L File to write the report to (default-OUTPUT)

UN Subordinate user number for which to write the report (master users only).

LO List options (default-F)

F - Full report (System, Offline and Budget)

R - System resource usage only

O - Offline resources usage only

B - Budget data only

D - Detail for each subaccount (master users)

S - Summary for all subaccounts (master users)

BR Brief mode - omit headings

NA No abort

The report produced will give last period (usually the day before), month-to-date and year-to-date information on resources used and money used where the resource used is chargeable.

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## NUSERS - by J.J. Drummond

I would like to propose that a NUSERS TLX request be added to the system. This would allow TELEX origin jobs to determine how many TELEX users are on the system.

Several users have requested the ability to determine how busy the system is, in order to restrict access to certain programs (games, for instance).

#### SYSTEM MAINTENANCE: People and Procedures

##### CALLPRG - Library Tape Changes - by M. Riviere

On May 31, Michael Frisch moved the program library MNSOPL from tape to disk. The decision was based on the frequency of MNSOPL usage. On June 2, Michael also moved UMRPG to a disk file for the same reason.

Also on May 31, I replaced the CALLPFM package in future, FORTRAN by a version in which I corrected a problem with the PFM no abort parameter.

On June 14, the following changes will be taking place among Callprg and Library Tape products:

Michael Frisch will be deleting from the Callprg index the entries for the sub-program library SSP. IMSL, the U of M arithmetic section of FORTRAN and RUNMIN, contain most of the actual set of subprograms now offered by UCC. There is a printout available, "INDEX TO UCC SOFTWARE," which describes the current local subprograms available on all the UCC libraries.

Michael will also be deleting the Callprg entry for PSTPRC, since PLOT31 should be used instead of that product. Michael will also be removing the past version of TYPESET.

In conjunction with Bill Elliott, Michael will also be changing the setup for CHEAP31. The CHEAP31 entry will remain in the index but PLOT31 will be retrieved when CHEAP31 is referenced. An informative dayfile message "PLOT31 USED, USE PLOT31" will be given by Callprg in that case. The up-to-now current version of CHEAP31 will become available as Fetch type. The future version, identical by now to the current one, will be removed.

As part of the end of the spring quarter modifications, Howard Kurs will be installing several level 12 products that were offered up to now as future versions, as the current ones. Howard will also be replacing the future versions of those products with their level 13 updates. These products are: SORTMRG and SRTLIB on the Library Tape and COBOL, CB4LIB, COPYCL, ESTMATE, IXGEN, SISTAT and SMTEXT on Callprg. Howard will also be updating the COBOL and Record Manager texts COBERTX (Library Tape), RMERTXT (Library Tape) and TXT6RM (Callprg, Fetch type) to level 13. These texts are upward compatible with level 12 and will be used in relation to the current and future versions of the packages which they are associated with.

Howard will also be changing FILE (Library Tape), SYSIO (Library Tape) and IOTEXT (Callprg, Fetch type) with their level 13 versions. These three products are, like the texts, also upward compatible with level 12. FILE and SYSIO have already been offered for testing. (FILE level 13 was available as Fetch type and SYSIO was retrieved with FUTURE,FTN and also available as FUTURE. IOTEXT is an installation text and was previously used to create the FORTRAN library.) Since these three products are commonly used by COBOL, SORTMRG and FTN, their update to level 13 consolidates the FTN level 13 installation. However, the level 12 version of SYSIO will still be retrieved when the current versions of COBOL and IXGEN are used. Besides that, Howard is also keeping an entry for level 12 SYSIO

to make it available as Fetch type in case it may be needed to run old binaries or to use it with the current version of SORTMRG (level 12). A reference to FETCH, SYSIO will very unlikely be necessary but its availability complements Howard's set of level 12 products now available as current.

Howard will also be installing future versions of S2000 products. The future versions of PLICOB, PLIFOR, PLILGO and RWEXIT will be available on the Cyber and the future version of S2000 will be available on the 6400 as well as on the Cyber.

Howard will also be placing a version of S2KIND, a procedure file for use with S2000 for indirect access files as a 6400 Callprg file. S2KIND is already available in the Cyber.

As part of the spring quarter end changes, I will be replacing FTN and FORTRAN in the Library Tape with the versions available up until now as future Callprg packages. This change will update FTN from level 11 to level 13 and FORTRAN from level 12 to level 13. The level 13 version of FORTRAN also included local modifications which took place during the spring quarter.

The Fortran Library will be modified before becoming current. The record CPUCIO from Michael Frisch arithmetic section of the library will be removed. CIO= entry on SYSIO conflicts with that record.

CPUCPM, another record from the past SYSLIB, also included in Michael's section of FORTRAN will however remain as it is for the time being. CPUCPM provides the CPM= entry for the control point manager. Loading the equivalent of the relocatable version of COMCCPM (RELCPM) from SYSLIB causes duplicate entry points since the SYS= entry is available on SYSIO as well as on SYSLIB.

I will also be replacing LDRTEXT and FTNMAC (both Callprg Fetch type packages) with their level 13 versions. At the same time I will be changing all the future entries for FTN, FTNMAC, FILE and SYSIO by message type entries informing that a future version of those products is no longer needed. I will keep, however, the entry for FUTURE, FORTRAN since the local modifications to the Library will still be offered for testing as such.

Also as part of the end of the quarter routine changes, I will be replacing SYSLIB in the Library Tape with a new reassembled version with the latest versions of the common decks. The relocatable version of the two new common decks COMCCSO and COMCDTM will be added at that time. I will also be replacing the Fetch type text associated with SYSLIB and RELTEXT. RELTEXT will be considerably shorter then, since the system text MACTEXT now contains most of RELTEXT contents. RELTEXT will be composed only of the common decks COMCMTM and COMCPFM.

The next Callprg index and Library Tape modifications will be taking place on June 28. The requests for modifications should be sent to me before June 16.

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Cyber 74 Deadstart Dump Analysis - by K.C. Matthews

23 May 1977 - 2 June 1977

All crashes, except 1, over the covered period were caused by either of two reasons:

1. Plotter - PDP-11 channel hangs due to hardware/operator communication difficulties.

2. EXPORT hangs, due to West Bank testing a new version of IMPORT during production times.

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6400 Deadstart Dump Analysis - by R.A. Williams

<u>Date</u>	<u>Description</u>	<u>Tape</u>
770601	One of the 6676 multiplexer units started producing garbage output as a result of a broken wire.	Fixed
770602	The 844 7054 controller on channel 6 hung again on a general status request time out.	DDT-10